MULTIPLE ASSESSMENT OF RESPIRATORY THERAPY STUDENT
CLINICAL PERFORMANCE

By

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Abstract of Dissertation Presented to the Graduate Council
of the University of Florida in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

HOLISTIC ASSESSMENT OF RESPIRATORY THERAPY STUDENT
CLINICAL PERFORMANCE

by

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April, 1984

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The purpose of this study was to test the relationship between
students' clinical grades and ratings of their clinical performance.
The investigator used a rating scale to assess satisfaction with
respiratory therapy student clinical performance. Fourteen, clinical
supervisors, and the students themselves scored on return of satisfac-
tion with health care delivery by respiratory therapy students. Ratings
of each group were correlated with student clinical grade point
averages by a Pearson Product Moment analysis procedure.

Student self-assessment correlated highest with diabetic perfor-
mance while clinical supervisor and patient evaluations correlated
weakly with student clinical preferences.   Another outcome of the
study was the revelation that by combining the evaluations of all
three groups with a clinician style assessment device clustered by
clinical supervisors, a moderately positive correlation with diabetic
grade point average was achieved.

A final area assessed in the study was the input of prior
characteristics for age, education level, and previous hospital

admissions on the patient ratings of student performance. Patient characteristics of age, education level, and number of previous admissions had no effect on ratings of satisfaction with care provided by respiratory therapy students.

The results of this study suggest that by combining clinical assessment input from a variety of participants a higher level of agreement with didactic performance can be achieved than that provided by supervisors alone.

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Health related education evolved from a need to provide large
numbers of specialists trained to meet the diverse needs of patients
in a modern health care facility. Allied health curricula include
both didactic and clinical education. Throughout the program, a dis-
parity occurs between grades earned in didactic courses and those
obtained in clinical rotations. This study was designed to test the
relationship between student didactic grades and ratings of their
clinical performance.

Respiratory therapy is one of several allied health professions
to appear in the past 40 years. The profession evolved because of its
increased numer and complexity of therapeutic procedures being devel-
oped for the treatment of both chronic and acute disorders of the
cardio-pulmonary system (MacFarrane, 1968). Respiratory therapists
have embraced the role priorities of treating and caring for the
patient. These principles are actively shared by all allied health
professions in establishing roles of ethics for providing professional
behavior while meeting the needs of patients. Patients have recently
assumed a greater invlovement in the clinical setting by entering the
consumer/accountability movement that has had such a profound effect
on the actions of educators and public officials in planning for the
future. In the clinical setting, the patients or patient interact has

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been in evaluation of the quality of services received (Kirchhoff, 1976; Kitchen, 1978; Martin, 1981; Motersi, 1971; Weiner, 1978; Woolley, 1977). This development was often via examinations allied health education equivalent to improve the quality of clinical performance evaluation. Including the patient in assessment of student clinical skills will provide the instructor with data from another perspective of level for clinical evaluation. The use of multiple evaluators, viewing the clinical performance of students from a variety of perspectives, has been termed multiple-level evaluation (Litterelo, 1975). The technique has evolved as a supplement to traditional single-level or instructor-administered methods for evaluation.

Problem Statement

The three components of difficulty in clinical assessment surfaces when the instructor compares student grade point average in didactic courses and grade point average for clinical evaluations. Occasionally a wide disparity develops between the two indices. Didactic evaluation is generally based on objective measures of cur- riculum subjects while clinical assessments are derived through instructor-administered instruments, generally checklists of subjective criteria.

The problem confronting clinical educators is in the development of a reliable instrument for assessing the clinical skills of students. Multiple evaluator instruments would seem to suggest one possible direction. Involving instructors, students, and patients in the assessment of clinical performance may offer a variety of perspectives

to provide a more reliable means of clinical assessment than that of single-level instruments administered by technicians. Multiple-evaluator instruments are most valuable when they complement the traditional methods more widely used (Waters, 1978).

Purpose of the Study

The major purpose of this study was to test the relationship between student dietetic probes and rating of their clinical performance.

Traditional single-level clinical evaluations have long been recognized as subjective and many instruments used for clinical evaluation are weak. Wortley (1977) even stated that in clinical evaluation instruments may be judged as good.

The intent of this research was to examine clinical assessment as it relates to dietetic evaluations. This study is based on the premise that clinical evaluation is generally subjective and frequently a poor reflection of clinical expertise. However, including other groups in the assessment of clinical skills may improve the integrity of evaluation.

Justification for the Study

A goal of clinical education is to provide effective feedback to the learner to facilitate and maintain comprehensibility between creativity and quality (Sanders, 1978). One of different groups of evaluators has been found to be one means for achieving this goal. Linsosk (1977)

important that clinical evaluation become more beneficial when performed by multiple raters using the same set of evaluation criteria. Thornton (1980) reported similar findings when he found that using different levels of raters improved the reliability of evaluation.

Heinplewicz and Strachstam (1979) recommended the use of patients in the clinical facility, students enrolled in the health related program, and clinical instructors as potential evaluators of clinical performance by students. Nelson (1966) echoed this view by proposing the same groups as justifiable that could be involved in the assessment of health care. Demand for accountability and consumer provision has more generally become more commonplace in our society. The accountability and consumer rights movement is attributable to several recent education through the media. Delineated factors to which higher levels of health care, a growing medical knowledge by the consumer and the rising cost of health care, increased litigation pertaining to the quality of health care, and consumerism involvement of third-party payers in educating the consumers concerning their rights (Zuckser, 1975; Donlhar, 1975; Blue & Wilson, 1980; Rovella, 1976; Posluma, 1978; Roberts, 1970; Margulee, 1978).

Concern for the quality of health care education continues to rise. In the health care setting, consumers concern for quality has resulted in numerous changes in the review of the health care process. Among these changes is the federally mandated implementation of quality assurance reviews designed to provide an in-depth analysis of the health care provided. These reviews have become mandatory as partial fulfillment of accreditation requirements for hospitals and for

reimbursement of hospital charges for newborn patients. In educational settings, reviews input into the quality of health care education in finding its way into the curriculum for reconsideration of several symptoms. Recent years is not a requirement in baccalaureate nursing programs and has been considered by the Joint Review Committee for Respiratory Therapy Education as a possible requirement in the Respiratory Therapy baccalaureate for accreditation of respiratory therapy education programs as is introduced in 1983.

Consumer input into the evaluation of the quality of health care is not without controversy. The discussion of the use of consumers of the health care industry as evaluators is similar to the discussion that took place throughout the 1960s and early 1970s concerning the validity of student evaluation of instruction at institutions of higher learning. The question raised was whether consumers have enough knowledge of the issues to lend a valid and reliable opinion of the quality of services received. The answer to this question was suggested by Coffman (1954) and Costin, Greenough, and Menges (1971) when they reported that the results of properly designed studies have demonstrated that student ratings to consumers have not only provided a valid and reliable assessment of information on the quality of courses and instruction. Wotson (1970) states this view in the health care setting when she stressed that patients were in a prime position to provide information that is not readily available from any other source, since they have the greatest opportunity for direct and continuous observation of health care delivery. While patients may not be able to rate technical quality of care they receive, their well-being and

continues in the area they receive may be related to how they perceive the quality of care. Roper and Jackson (1981) found that patients' opinion of nurse and physician roles were more associated than the opinions of any other group of evaluators in the health care setting.

The second level of evaluative purpose in this model is that of the student. Being a student as self-evaluator of the success of the curriculum is controversial. However there exists literature that students are not perfectly should continue to be responsible for their own learning (Lazarus, 1978; Nelson, 1967; Moore, 1976; Rowland, 1976). However there exists conflicting literature that has listed a second hand researchers to a number of problems and their subjects. Johnson (1978) found that self-evaluation ceases to increase student motivation to learn and also helped the student to evaluate the needs of the learner as an instrument of evaluation. Balley (1978) also described self-assessment as enabling the student in recognizing strengths and weaknesses. Peter (1978) described an additional advantage of self-evaluation as being related to the dimension of individual student learning. In reporting their assessment of student relevant to the student's development in clinical evaluation students become involved in learning, participation in clinical evaluation (clinical maturity) (p. 11).

Throughout the history of clinical education, evaluation has been a problem. In the clinical setting, responding society of skills from evaluation and evaluation from care of patients is impossible (Wolf, 1976). Nursing, because of its maturation as a health profession, has been plagued with problems of clinical evaluation for many years. Even any other health related profession. As recently as 1979, Hodson and Nelson identified clinical evaluation as a major problem still facing nursing education. There is little doubt that few concepts of our

approaches to solving the dilemma of evaluation are covered in the health related professions.

In separate studies Breese (1975) and Martin (1961) used a rating scale to evaluate patient satisfaction with nursing students. In each study, students, instructors, and patients used the same rating scale while evaluating from their respective vantage points. Patients' assessment and dilemmas grade point average of the students projection correctness practically. The results of these studies would seem to suggest that the use of multiple evaluator assessments of student clinical performance warrants further investigation. This may be particularly true when it is compared with a single-level, instructor-administered instrument and correlated when the student grade point average in clinical courses.

Allied Health professions have now emerged to the point that many free consumers can select whereby there onbehalf on the endorsement of the health care delivery system. John Stanford will allow the worker in health care to help prevent the declarations and strengthen the services now provided in an attempt to improve the quality of health care and thereby reduce its outcome spent in direct care facilities. This latter observation has become particularly important since the Social and Fiscal Responsibility Act (SFRA) became effective October 1, 1983. The SFRA provided for two major reforms that will have impact on the health work community. First, Medicare reimbursement will be reduced by the billion dollars over a period of three years. Second, work began on a flat fee or prospective payment system that would replace the cost actual reimbursement or retrospective cost basis for service that has been in use since 1965. Diagnosis Related Groups (DRGs) are the key to the prospective payment system (Hough, 1983). The DRGs are groupings of similar diagnoses that will

be used as the basis for determining how much money a hospital re-
ceives for the care of a Medicare patient. The idea behind prospec-
tive payment is that reimbursing hospitals at a fixed rate will in
no incentive to cut costs. The advent of DRGs and PPSs will create
the health care industry to become vitally concerned with the best and
most efficient manner in which to operate through the facilities or
mechanisms for survival (Bryant, 1982). Health care professionals and
economists now work together to educate each other in providing leader-
ship in health planning. The emphasis of consumer input can be related
to what the public desires from the system, how patients expect to be
treated, what patients consider as equitable levels for fees, and
finally, what is missing from the health care delivery system (Nienhuys,
1976).

Warner (1979) stressed involvement of consumers as evaluators of
the health care situation spoken while working with beneficiaries
serving members in Iowa. Using a 13-item, paper and pencil rating
scale designed to elicit patient opinions of the quality of health
care received, Warner statistically corroborated that other types of
nursing programs make use of the rating scale. This laid to the Berlin
study (1981). Battle used the same instrument in evaluating patient
satisfaction with care by associate degree nurses. Both Warlin and
Waters considered a number of variables in the patient population
studies. Both concluded that the only significant variables were patient
age and education level. Patients over 65 and patients with post
secondary and higher levels of education were more critical of care
received. Student grade point average and elapsed self-esteem with
the patient rating scale had a high positive correlation.

The significant level of agreement in the replication study by Marsh has led this researcher to make several minor changes in the Perfect Rating Scale for satisfactory analysis with scoring runs. The changes was designed to adjust the terminology used in the instrument to have application for the larger population of allied health professions.

The concepts of accountability and consumerism, the instructor evaluation, and self-evaluation were related to related ratings of performance and to student self-assessment. The concepts was designed to determine whether patient age, educational levels, and number of previous hospitalizations influence patient ratings of student performance. The data presented for the patient ratings were subsequently measured with student self-evaluation, and instructors evaluations, and then correlated with grade point average as a measure of the ability of the rating scale to assess satisfaction with student performance.

Assumptions

1. Patients, students, and clinical supervisors as multiple raters of student clinical performance will improve the reliability scores of student health record programs (Linacre, 1979).

2. Improving the reliability of clinical assessment for health related students will improve the quality of clinical performance evaluations (Streeten, 1985).

3. Student attitudes of self-concept, ability, interest, and effort all have a significant relationship to grade point average (Mitchell, 1979; Williams and Snell, 1980).

4. Pollsters' opinions of health care workers are more consistent than the opinions of any other group in the health care setting (Rogers & Jackson, 1961).

5. Patient characteristics of age, education, and previous hospital admissions will affect student ratings (Martin, 1981, Watson, 1979).

6. Data produced by patient ratings of controversy therapy students will agree with results obtained in similar studies of nursing students by Watson (1979) and Martin (1981).

Hypotheses

The hypotheses tested in this study were as follows:

1. Ratings of controversy therapy students by patients, clinical supervisors, and self will have a positive correlation with controversy therapy grade point average.

2. Ratings of controversy therapy students by patients, supervisors, and self will have a positive correlation with each other.

3. The overall satisfaction with care given by patients (controversy therapy students will be assessed "very high" by patients, supervisors, and students.

4. Student grade point average will have a positive correlation with overall patient satisfaction.

5. Patient ratings of student clinical performance from which individual characteristics of age, education, and previous admissions

have been restimilar will retain more strongly with student clinical grade point average than with the patient ratings of student clinical performance.

Delimitations of the Study

1. Only Respiratory Therapy students in the third of four clinical courses will participate in this study.

2. The instrument will be from Brunswick Junior College.

3. Experiments will be from Glynn-Brunswick Memorial Hospital.

4. Only patients in the primary affiliate, Glynn-Brunswick Memorial Hospital, will participate.

5. All student participants will be enrolled in the Respiratory Technician Program of Brunswick Junior College.

Limitations

1. The noise and confusion resulting from the separation and examination at the primary health care affiliate had no significant effect on the study.

2. Patience, attitude, and clinical experiences were honest and impartial in responding to the Patient Rating Scale.

3. Student characteristics of age and educational achievement will not be controlled and will they have a significant effect on student self-ratings.

4. Clinical experience age and occupational experience was not controlled and had no significant effect on student ratings.

Definition of Terms

The following terms used throughout this study are described here.

Adult patient:	A hospitalized individual aged 18 or older at the primary affiliate.
Student:	A competency theory student enrolled in the third of four quarters at Brunswick Junior College.
Instructor:	The employee of Brunswick Junior College charged with the responsibility of teaching competency theory courses and coordinating clinical experiences for the students.
Supervisor:	An employee of the primary affiliate charged with the responsibility of providing clinical supervision of no more than five students at the clinical facility.
Midterm grade point average:	The grade point average the student has earned in classroom courses on a 4.0 scale.
Clinical grade point average:	The grade point average earned by the student for work performed in the competency theory program and reported on a 4.0 scale. Used interchangeably with midterm grade point average.
Student achievement:	Score received on the patient rating scale (Appendix A) or the instructor checklist (Appendix F).

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Student skill:	The ability of the respiratory therapy student to perform common procedures within the limits of the procedure manuals.
Patient categories:	Patient's reaction either immediately prior to hospitalization or prior to the required disability.
Rating scale:	Nineteen-item Patient Rating Scale developed by Watson (1978), edited by Martin (1961) in common patient satisfaction with nursing students (Appendix A), and amended for respiratory therapy students included in the present study.
Instructor checklist:	Eighteen-item criterion-referenced checklist for instructor use in student evaluation (Appendix F).
Major quarter:	Students enrolled in the third of four academic quarters that constitute the respiratory technician program.
Didactic:	That portion of the respiratory therapy program conducted in a classroom environment. Includes lectures, audio-visuals, instructive, and student presentations.
Clinical:	That portion of the respiratory therapy program conducted at the primary health care affiliates. This instruction is primarily in the education and experience domains of learning.

Accountability has been a major topic of educational discussion and the focus of sharp controversies. Two decades ago, the term was rarely applied to the process and measures of education. Today, accountability has become the battlecry of countless users of the education system, leading at its extreme pressure on education--con-sumerism.

Educators have chosen evaluation as a method of responding to the sharper evaluation used in clinical situations is subjective. In recent years, the controversy surrounding accountability and evaluation tech-niques has spread to the health care community. Evaluation in health related programs is judged to be a major problem. Huckley (1977) reviewed nursing evaluation procedures and found ones that could be considered reliable measures of clinical performance.

Litwack (1976) proposed multiple roles evaluation as a technique for improving the reliability of evaluation in health related programs. This suggestion was reinforced later by Thoreson (1980) when it was recommended that evaluation was improved when different levels of evaluators were used. Evaluators in these programs included the patient as a health care consumer, the student as a consumer of the education system, and the instructors in the dual role of the educator and health care professional with responsibilities in both roles. The

methods of this study in the assessment of clinical performance
demonstrated by the respiratory therapy students. Evaluators will be
patients, instructors, and the students themselves. A summary of
findings on the use of these three groups of evaluators follows.

Consumer Evaluation

Consumer participation in the assessment and planning of health
care has been offered as a prescription for increasing provider respon-
siveness to the needs and goals of user services (Bersuch & Perry,
1974). In option for improved services, funders and state govern-
ments have mandated that consumers be included as members of the
various planning boards charged with the guidance of health care pro-
fessionals. Mandates from governing agencies to not guarantee consum-
erism between providers and planners, a problem exacerbated by differ-
ing objectives held by these groups. The primary reason for the rapid
increase in consumer participation in evaluation of health care
services is concern for the quality of performance of services and
rising costs. Improving the quality of performance of services is
the most constructive reason stated for including consumers in the
planning and evaluation of health care.

As consumers, patients must be understood what is happening to
them, and believe they would respond more rapidly to treatment if they
were permitted to become active participants (Dreston, 1978). Con-
sumers form these consumers of health care are beginning to have an
effect on the accountability planning that is increasingly considered
in health education programs (Bernstein, 1971). In an attempt to

correct the deficiencies that have long existed in education programs, educators are developing memorable standards of practitioner expertise. Standards to assess practitioner competency have largely been stimulated by a public clamor for higher quality in health care services (Cryman, 1978).

Sampling the opinions of consensus about the standard of care they receive is one way of evaluating the satisfaction of health care as perceived by patients. Patients are seemingly a reliable source of information about their expectations of care. In a study by Hogan and Jenison (1963), patients' opinions of nurse, self, and physician roles were found to be more uniform than the opinions of any other subjects studied in the health care setting. Using the concept of patient involvement to evaluate care provided in critical care areas, Kirchoff (1936) interviewed 63 intensive care patients to assess their opinion of the quality of care. The responses included a large number of negative comments, a particularly disturbing finding considering the low ratio of patients to nurses.

Any attempt to judge the validity of patient evaluation of provider care should include the results of a study by Nehring and Geach (1973). These researchers discovered that patients were reserved in making negative comments for fear of reprisals. Possibly in the health care environment role defined by patients along a continuum of possibilities including sham, both kowtai and physical, and the shifting of caregivers. This fear of reprisal is an especially significant threat for patients who generally are penalties of offer resistance. Dryor (1983) reported that for chronically ill respiratory patients,

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the valuations to take negative comments are compounded by their pulmonary distress. These patients experience a declining ability to take decisions of a judgmental nature as a result of cerebral hypoxia caused by their pulmonary disorder. When consumers are asked to describe the characteristics of a good patient, a uniform description emerged. A good patient was described as one who expresses self and listens to health care personnel, accepting their judgments and decisions about care, while generally accepting a dependent role. These same patient attitudes were reported by the patient population on traditional attitudes and roles. The more informed or non-traditional patient is one labofor a consumer and in addition to the attitudes and roles of the (tradition) patient, assume involvement in the care is encouraged by both policers and health care staff (1982). While patients may not be able to judge the technical quality of procedures performed by respiratory clinical contents, they can judge their feelings with respect to these procedures. Patient attitudes and confidence in the care provided are greatly influenced by the quality of pro-

cedures performed and the manner in which the institutional care personnel and (taff). The more informed or non-traditional patient is one laboior a consumer and in addition to the attitudes and roles of the (traditional) patient, assume involvement in the care is encouraged by both patient and health care staff (1982). While patients may not be able to judge the technical quality of pro-

A growing concern for patients as consumers has resulted in numerous studies of patient satisfaction with health care (Doyle, 1981, Hart & Sanazri, 1975; Nutson, 1975; Horgan, 1976; Nehring & Geach, 1978; Tuttsit, 1975). These investigations attempted to view patient satisfaction with health care provided by various health professions, resulting in a common theme. The common goal was how to improve communication with consumers to evaluate their perceived desires in having important mechanisms in the delivery of health care

and to improve the quality of care provided. A second conclusion from these studies was to include patient opinions of health care in the evaluation of the delivery mechanism (i.e., evaluation of the nursing care or other health related occurrences by the consumer). From these early beginnings with consumer involvement in evaluation of professional health care delivery, it was only natural to expand the consumer role to include evaluation of viewers in the health care environment. The percentage of this type of evaluation is to provide the developing professional with consumer feedback from the consumer on the satisfaction with care provided. This evaluation allows student practitioners to alter their attitudes and methods of clinical practice but greater satisfaction among the recipient most concerned with these activities and practices. Another advantage of this type of contact exists in that it provides for improved communication between health care professionals and consumers. The expected result of this involvement by consumers and professionals will be improved health care planning and delivery of services.

Iatrogenic Evaluation

Accountability is one of the major facts of life in American higher education, a condition that will continue to exert a major influence on education planning for the foreseeable future (Kinos & Miller, 1968). Accountability, as used in education, is equated with responsibility for the processes and outcomes of education. As the health related professions, the responsibility for the outcome of health care has long since been accepted by the professionals in the

clinical setting. However, these same professionals were generally remiss in assuming the responsibility for the outcome of educational programs. Greatest attention is lavish upon the numerically less heavily laden topics. An even greater emphasis on the written exam is the directive (see p.19 and p. 70 pre out and below (Bryant, 1961).

While this was traditionally viewed as a question mind set, the accountability movement has been successful in limiting the practice philosophy and embracing the construct/accountability concepts. Hereby educators were among the first of the health professions to develop four components of accountability in programs of nursing education (Reese, 1974). These components include (1) agreed upon goals in the professional area for which practitioners are to be prepared; (2) agreed upon standards for specific practitioner performance; (3) agreed upon structures (on the teaching component); and (4) an agreed upon assessment of performance in both controlled and clinical situations (Reese, 1974). Recognizing changes based on an corresponding accountability/ out-comes, however, the aviatic accountability components have application throughout all health professions.

Respiratory therapy educators are now faced with the dual responsibilities of introducing new practitioners to both clinical and didactic schools of evaluation while simultaneously introducing them to the clinical environment. Cognitive, psychomotor, and affective bodies of knowledge or skill development affect the educator with the commercial task of providing the students with a fair evaluation of their skill development. The program component that aids this task must make a proportion of difficulty in the measure-reliable nature of the

western health care facility as a learning laboratory (Donovan, 1975). Not only must individual differences in students be accounted for in developing an evaluation instrument, but diversity in the health care consumer must also be considered.

As health educators develop their tools of evaluation, they should keep in mind the three groups that are most affected by this procedure: the patient, the student, and future employers of graduates. The evaluative instrument should include motivation to assure clinical skills, cognitive foundations behind these skills performed, and general affective skills needed to gain and retain employment (Rogers, 1976). Health care educators are generally adept at constructing cognitive assessment devices, however, the challenge remains in developing an instrument that offers objective evaluation of skills and attitudes in the clinical setting. As no other time in their professional careers will their ability to give safe, competent care be so carefully evaluated as during their experience as students (Litwack, 1976). One primary reason for evaluation is to improve communication, which in turn will provide the student an opportunity to improve clinical performance (Mauksch, 1976). The instructor must establish an atmosphere of mutual trust and respect to evoke the greatest reciprocity for success for evaluation.

Throughout the history of health related education, the clinical instruments have been laudative and subjective in nature. Tradition may be viewed as the principal cause of this extended career of evaluation, yet until it persists. Probst and Nelson (1979) reported that effective clinical evaluation remained the number one problem

facing matching educators, with no clear answers, but the possibility
of many creative and unique experiences. This is a very commentary on
suburbs education when viewed from the perspective that nursing has
greater experience with evaluation than any other health profession.
Inasmuch as the complexities and fruitful forms of evaluation have fallen
from favor, she presumes prose to replace law and innovation scab-
niques for more objective forms of evaluation (Hardware, 1962; Morley,
1977).

Choiceless have long been the tool of choice in clinical evalua-
tion. The list of individual researchers who have suggested the use
of checklists for specific competencies is work overly (Shows & Boulde,
1975; Mastonaret & Seman, 1915; Litusch, 1976; Puri, 1969; Buswall &
Hisner, 1979). These checklists include those reviewed for
technical skills, leadership, and communication. This form of evalua-
tion was identified by Kelly to bring on highly susceptible to the
values of the experience as to those of the student being evaluated
Schwing, 1974; Lynch, 1976). Checklists serve as an excellent tool
for evaluating the accomplishment of a task but are subjective when a
qualitative assessment is attempted recursively. For this reason,
alternative modes of evaluation are indicated. Among the alternatives
to gain acceptability according to the classroom are multiple family
evaluators, standard self-assessment, peer evaluation, and patient
evaluation.

Persons (1979) recommended that the goal of clinical evaluation
is to provide effective feedback to the learner to facilitate and
maintain compatibility between consultancy and quality. Phillips (1978)

further suggested that evaluation must be based on specific and measurable objectives and commercial behavior must be reinforced with positive feedback. Objectives are a constant source of data for their evaluation, which usually yields results that are frustrating but may occasionally be rewarding (Kirchen, 1979). When the characteristics of clinical evaluation are reviewed a moral emerges in which the best characteristics of clinical assessment are evident, multiple error evaluation. Powers (1975) suggested several different levels of evaluators to achieve the goal of evaluation.

Student Self-Assessment

For standard self-assessment to be implemented the characteristics should be in place: a teacher who cares and a set of well defined and carefully constructed clinical procedures criteria (Palmer, 1967). The instructor is responsible for stimulating learning and reminding students to keep an open and objective mind while self-evaluating. When properly implemented this form of evaluation should slim the student and teacher to experience optimal growth.

Self-assessment as an evaluation tool continues to be a hotly debated topic throughout all educational settings. Allied health education with its inherent tendency to recruit both resourceful and the perfection in an area where self-assessment is just emerging. The use of self-assessment is further complicated by the poor sense of responsibility that exists for this technique of evaluation. Mahay (1979) reported that not only was self-assessment viewed with varying degrees of faith, but that good self-assessment was merely a simple

procedure. Among the megalian framers outstanding self-assessment in the problem of rarely generous students assessments. This latter was predicated on separate studies by Harke and Goodrin (1976) and Harke and Kunt (1966). These researchers reported that grades presented by self-evaluation were really generous and resulted in little agreement with instructor evaluation. Boersma (1976) corroborates this view with research in which no correlation occurred between student ratings and faculty evaluations of junior medical students. While little agreement existed between evaluations of medical students and instructors, in one never between variance and instructors that they evaluated those students. In an effort to explain student tendencies toward rarely generous evaluation, Skinner (reported by Johnson, 1979) suggested that the inclusion itself exerting reward, because students were often not in a position to judge their own work. Thornton added weight to the negative view of self-assessment when he reported that most studies showed individuals found themselves higher than recognition groups rated them. Thornton also suggested that the negative influence of self-evaluation was not always apparent since each student evaluation of their respective groups rated them. Thornton also suggested that the megalian self-evaluation was not always apparent since each student and, they are likely to be different from expected extremes of the one performance. Self-appraisal was placed on a par with environmental influences and actual conditions of the student directly in order to reduce the accuracy of the evaluation.

In a more moderate vein, Larson, Flory, and Ash (reported by Larson, 1980) proved the possibility that self-assessment of skills, abilities, knowledge, and job performance might be a source of valuable information. Larson examined the tendency that since findings of self-assessment may or may not work. The generative factors exist

include the judgmental process, the reaction of an individual student to self-assessment, and the accuracy of the self-assessment. The common gripe for negative commentary on self-appraisal was the lack of objectivity.

Self-assessment has had its share of proponents as well as detractors. On the positive side, self-assessment has been shown to influence internal and external motivation (Bandura, 1982). Pence reported research on this topic conducted by Palmer (1974). This research showed a high positive correlation between desired ratings and student self-assessments. Pence proposed that if the responsibility for learning belongs to students, then they ought to be encouraged to establish their own goals for learning and to determine the criteria for assessing attainment of these goals. Inasmuch as students have a responsibility in themselves, so to speak, and so the profession they are endeavoring to enter, they should share in the responsibility for systematic, open, non-human assessment of their own progress and endeavors (Litwack, 1979). The major advantage of allowing students to develop valuable skills in professional self-assessment is to improve the quality of care provided by the health care consumers. When patient evaluations are reported with student self-assessments, the student gains a greater understanding of clinical performance. From a comparison of self-assessment, patient evaluations, and instructor assessments of clinical performance, the student will gain a clear view of the quality of care provided.

Williams and Mach (1964) and Mitchell (1978) demonstrated that student estimates of self-concept, ability, interest, and effort all

have a significant relationship to grade point average (GPA). Students with a positive self-concept and those with high degrees of self-confidence also tend to possess high grade point averages.

Dailey (1978) suggested effective self-assessment fosters independence and self-direction, both valuable assets in the health professions. Palmer (reported by Johnson, 1976) reinforced this point when he stated that students who post a failure to determine their own grading would rarely better self-understanding. This improved self-awareness allowed the student to develop a better perception of the needs of patients.

Identification of student perceived strengths and weaknesses is yet another advantage in using self-assessment evaluation procedures (Johnson, 1976). Once in between instructor and to more able to assess student feelings that students are to assess those of instructors. Help students be in a position to evaluate their degree of comfort or discomfort with specified clinical procedures. This perspective is the use of self-assessment provides the student with a valuable opportunity to develop a professional's ability to judge one's own limitations. In addition to assisting the student in the development of a more mature outlook toward self and work, this evaluation procedure will allow the student to evaluate patient and employer needs more objectively. The advantage of this realization is that the instructor may now begin to make his estimate of the suitability of self-assessments when attempting to pinpoint student strengths and weaknesses.

Penland (1979) has suggested that participation in self-instional and self-planned evaluation can be promoted by self-assessment

experiences through the education preparation for admission to a health care profession. Nursing has already embraced self-assessment as a tool for evaluation (Baxide, 1981). Bavin (1981) summed the advantages of self-assessment as increased self-awareness and self-actualization, more ability to assess both patients and self with greater accuracy, and a deeper, clearer understanding between student and instructor as well as a better self-understanding. Increased self-esteem yields higher self-evaluations, which in turn yield higher performance (Diaz, 1980; Levine, 1980; Meyer, 1980). If health educators can improve student performance by using self-assessment as a means of improving student self-esteem, then every health care profession should balance this metal of evaluation as a means for ultimately providing increased levels of clinical performance.

The implication for the use of multiple raters on evaluators of student clinical performance is clear. De 1979, Linsack suggested that patients, students, and clinical instructors serving as multiple raters of clinical performance by students will improve the reliability of clinical evaluation in health related disciplines. Thornton (1980) maintained that improving the reliability of clinical assessment for health related students will improve the quality of clinical performance evaluation. Effective feedback is a necessary foundation for close communications in the assessment of clinical performance by students (Pearson, 1972). Use of multiple levels of raters will provide the health related student with an understanding view of clinical performance. This view will allow the student to adjust technique and criticism, thereby improving the standard of clinical performance (Pearson, 1975).

Review of Related Research

The use of multiple evaluators in programs of inservicery therapy education is not documented in the literature. The researchers, Watson (1975) and Merris (1961), have used the technique while conducting research on various associations with care by nursing students. Watson developed and tested a patient rating scale with baccalaureate nursing students while Merris used the same patient rating scale with associate degree nursing students. The researchers utilized results that were essentially identical. While both populations were nursing students, the differences in educational philosophy between baccalaureate students and associate degree students suggested that the patient rating scale would have application among other allied health professions. While evaluating the reliability of the patient rating scale, Watson and Merris chose to use other levels of evaluators. Instructors and students. The use of multiple evaluators provided these researchers with additional data for determining the reliability of using patients as evaluators of care provided to students.

Duhlin (1981) used students from the third of four levels at a community college nursing program in Florida. The 33 students were rotating through general medical-surgical areas. His instructors from the nursing program faculty were assigned or supervises these students in their clinical work. Patients were selected on a convenience basis from various samples from in-patients of seven general hospital medical-surgical units. In addition only those patients that were both mentally and physically able were included in the patient population.

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Having instructors explained the purpose of the study and assured the patients that their responses would remain anonymous, their ratings would not affect the grades of students, and their participation was voluntary. Patients were also advised that the hospital had granted permission for the study.

Three patients who agreed to participate were provided with a rating scale, directions for its use, and demographic forms for purpose of data collection. Instructors were in the room instrument for evaluating three students that they clearly supervised. Students illness and the room instrument after they were advised by their instructor that they should complete the self-assessment from the perspective of the patient.

The patient rating scale was a measure of patient satisfaction with care provided by nursing students. The rating scale consisted of 10 items. The first 10 items measured satisfaction among the areas of interpersonal skills, leadership skills, and technical skills. Item 10 was designed to indicate overall satisfaction with patient care. All items were rated on a continuum. Participants in the study marked a single point between or along the three statements that best described their response. Ratings for the first 10 items and item 10 were considered separately, both in scoring the hypotheses and in statistical analysis.

The Pearson product moment coefficient of correlation was used to test the relationship between mastery 80% and rating, the ratings among the three groups, testing 80% and overall satisfaction as measured by item 10 or the total; and the relationship among ratings

of the three groups and line 18 on the scale. This was an appropriate choice for a statistical analysis since it summarized the relationship between two continuous variables and could be used for prediction.

Hartle chose the r test of significance to measure the relationship between the variables of points row, otherwise level, and number of hospitalizations and patient satisfaction with nursing care. Once again, the statistic was appropriate due to the size of the sample and because it is a reliable index for finding the significance of difference between the means of two independent samples.

A statistically significant difference was found between evaluations of those in age groups below 40 and those 43 and above. There was also a significant difference between evaluations by those with post-secondary education and those with less. The final variable of the number of hospitalizations was also found to be significant, with a difference measured between patients with three or more hospitalizations and those with none.

The data obtained from Hartle's study demonstrated that these three groups of individuals in the health care setting offer a new dimension in clinical evaluation. The ratings offered by these groups all had a positive correlation with student GPA in clinical courses. Raines has a clinical evaluation instrument obtained a consistently positive correlation with CPA. While the three levels of evaluators experienced some difference within their groups, the overall evaluation was positively correlated with CPA.

The population in this study was student nurses, with little in common with preprimary theory students. However, due to the high

level of agreement between the Gators scoring group and the Norris scoring group (No possibilities for using the present coding scale in other direct patient care protocols should be investigated.

The Rating Scale

Raters developed the rating scale used in this study as part of two doctoral research. She used the instrument during the 1974-75 academic year. Watson's student sample was from the baccalaureate nursing program at Grand View College, Des Moines, Iowa. Martin's student sample was drawn from the associate degree nursing students at Valencia Community College, Orlando, Florida. Watson's student sample was a northern five-year program, while Martin's was a southern two-year program of study. Rater produced in both studies revealed a significantly positive correlation with student grade point average when compared with the evaluations of the three groups of raters.

Variables

The variables used in this study were patient age, educator level, and number of previous hospitalizations.

Both Watson and Martin reported that patient age, education level, and number of previous hospitalizations made a difference in patient rating. Patients in the above age 40 group and those below age 40 demonstrated a statistically significant difference in their rejection of care. Morgan (1976) found the same relationship to exist when patients under 40 compared more characteristics with care

than did other patients. Morgan (1974) also discovered that the number of patient hospitalizations affected the evaluations that patients render. Reliable hospitalizations resulted in less critical evaluations than those of patients with only one previous hospital stay. DeMaria et al. (1984), Perinol (1983), and Morgan (1974) showed that younger, more highly educated patients were more critical of the care they received. Weiss and Martin found statistically significant differences between those patients with post-secondary education and those with less.

Evaluation of clinical performance is rarely an objective procedure. As issues of this study was to determine the relationship between patient PDC and clinical performance as reported by multiple evaluators at common instruments. Duke (1972) reported, however, that didactic grades were not good predictors of clinical performance but that clinical grades were good predictors of on-the-job performance. It should be pointed out, however, that Forfine (1977) reviewed clinical evaluation instruments two years later and found none national that would be judged as good. The reason for using multiple evaluators was the need to improve clinical evaluation in the health professions. To help assess the set of multiple evaluators with student evaluation, an additional correlation of student PDA and clinical evaluations from the rating scale was carried out.

This study was designed to test the relationship between student dismissal grades and ratings of their clinical performance. The patient rating scale used in the multiple evaluator model was derived from an instrument developed and tested by Nelson (1975) and Morton (1981). An examination of this study proposed that the data produced by patient ratings of dentistry theater students would agree with results obtained in the morning studies by Nelson (1975) and Morton (1981).

This chapter considers a review of the ten related studies and an explanation of the methods of selection for patient and student samples and the clinical experiences who participated in this study. It also contains a review of the assessment developments in regard to the procedures used to administer; days to perfect, student, and instructors' populations.

Nelson designed the patient rating scale to evaluate nursing care provided by nursing students. Specific areas for which patients evaluated students were identified from objectives of the nursing program. Nelson developed the patient rating scale after reviewing several similar scales. Among the areas of student performance were interpersonal skills, leadership skills, and technical skills. Nelson conducted two pilot tests of the instrument with both hospitalized

adults and non-hospitalized adults. After consulting with the nursing faculty from Grant View College and considering the data from the pilot tests, she revised the statements for use in her study.

Students were rated by patients, instructors, and self on the quality of care given to patients. In Watson's study, the class subscales revealed low inter-reliability, and were therefore combined; the three attributes, and limited variability of the rating. Poor this, Watson concluded that it was difficult to demonstrate uniqueness of any subscales. She recommended that the instrument be used only as a measure of overall patient satisfaction with nursing care. Watson chose to implement the scale as recommended by Watson.

Watson used the rating scale as a measure of patient satisfaction with direct care by inservice nursing students. The last item of the scale, item 15, was designed to measure overall satisfaction with patient care. Item 15 was scored, "I am completely satisfied with the care I received. I'm not only at..." "I thought the care I received was adequate, but it was not all that I expected." "I am not pleased at all with the care I received. It did not meet my needs." All responses to the instrument were marked on a continuum. Furthermore in this study marked a single point between of below the three statements that best described their situation. The first 14 items and item 15 were considered separately in both the hypotheses and the statistical analysis. These revisions in language have been made to allow the assessment to be used with students outside the nursing profession. The original instruments were worded in such a manner that this could usually be done simply by removing all references to nursing from the instrument.

Pilot Test of the Rating Scale

The present investigator established the validity of the rating scale by a pilot test at Thomas Lee Area Vocational-Technical School in Thomasville, Georgia, in March, 1983.

The student population included 31 respiratory therapy students in the third of four quarters of training. Four clinical supervisors assisted in the data collection and supervision of students. The subject population included 43 patients with 681 of this total surviving from respiratory related illnesses.

Data collection for the pilot test was limited to four days. The procedure for data collection included ten separate collection days. Students, supervisors, and patients all evaluated student clinical performance using the revised patient rating scale.

Results from the pilot test revealed a need to strengthen the terminology used in the instruction sheets for patients and students. Another outcome of reviewing the pilot test results with clinical supervisors was their suggestion for a comprehensive orientation for supervisors prior to the collection of data.

Respiratory Therapy Student Sample

The student sample in this study was selected from advanced students enrolled in their third quarter of respiratory therapy coursework at Brunswick Junior College, Brunswick, Georgia. The program is a four quarter curriculum preparing students as respiratory technicians. Students are in the clinical area for approximately 300

hours prior to the beginning of the third quarter of study. At each of the first two quarter checkers spaced on additional 100 hours in the clinical affiliate. In addition to gaining clinical experience, students study anatomy, physiology, pharmacology, microbiology, and applied sciences prior to the beginning of the third quarter of study. At the end of the four-quarter program, students have acquired approximately 600 hours of supervised clinical experience and an additional 360 hours of didactic or laboratory instruction.

A non-random student sample was selected in the same manner as the Wakman (1975) and Merkle (1961) studies. Wakman recommended using a different type of ranking program to validate the results. Not only is restricture through a different type of program, it is also a different profession in the clinical setting. The tentative therapy program is fully accredited by the American Medical Association Committee on Allied Health Education and Accreditation, a standards credential in the National Program for Nursing Accreditation held by programs in the veterans and Martin studies. The third quarter courses include one relevant core course, one course for genes, breathing and general therapy, and one course in respiratory pathology. Third quarter students were chosen because of the similar degree of development likely to exist in those students who compared to the North study. In addition to having had similar backgrounds, external students had experienced ample opportunity to become accustomed to the clinical setting. Various core assignments during this study were heavy enough to assure at least three ratings and no effort.

Forty-four students were available in the course. All students were enrolled in course 220 (f), Advanced Respiratory Therapy I. Occident, Illinois,

underscored largely reduced the number of participants in AO.
Students were subsequently assigned to eight clinical supervisors
each of whom was responsible for five students. Assignments were
maintained throughout the eight-day period of data collection. The
number of packed ratings one student varied from one to four depend-
ing on the pattern discharged during this period.

Students completed self-ratings at the end of the eight-day
period. Students completed the same packet rating scale (Appendix A)
that had recently been completed at them. In addition, students
completed questionnaires (Appendix B) which detailed previous aca-
demic studies and allowed for grade point averages to be calculated
by the investigator. Clinical supervisors instructed the students
to complete the patient rating scales from the same perspective of
patients treated throughout the data collection period. Finally,
students were measured for the third time in this process that the
rating scales would have no impact on their grades and ostensibly would
be maintained. The final assurance of anonymity and non-involvement
of grades occurred at an orientation conducted approximately three
weeks prior to the data collection period. The second assessment was
delivered at the beginning of the rated for clinical evaluation.

Patient Sample

Participating patients were drawn as a non-random convenience
sample from the patients of the general medical-surgical units at the
primary affiliate for the respiratory therapy program. A requisite
for selection as part of this study was for the patient to be both

physically and mentally capable of completing the rating scale as evaluated by the medical staff. All patient participants who voluntary and final patient involvement was decided by the respiratory therapy supervisors in consultation with the investigators and hospital social workers. After the participating patients were selected, they were screened to the pattern and procedures of the study. Patient anonymity was emphasized, as was the informed standing of participating evaluators. Finally, patients were assured that both the college and hospital administrations had approved the study. The primary diagnosis among these patients revealed 74% of the illnesses were respiratory related. After a patient agreed to participate, the supervisor left information about the study, the rating scale, and directions for completing the instrument (Appendices A and E).

A patient demographic form (Appendices C) and another assessment of anonymity were included in the package. Supervisors collected data at the end of every second clinical day after the beginning of the eight-day data collection period, for a total of four data collection times. Patients were requested to unit until the student treatment period was completed at the data collection days to complete their evaluations. A participating patient who was discharged prior to the end of a collection period was requested to return the rating scales to the nursing desk. Patients who departed permanently were not included in the study.

Supervision Sample

The investigator selected the supervisor sample from the list of clinical supervisors currently employed in the Involuntary Therapy department of the primary affiliate, Upper-Greenwich Memorial Hospital. The investigator contacted a four-hour orientation for these clinical supervisors. The orientation explained the purpose of the study and sampling techniques, as well as procedures for reviewing and obtaining participating patients. The investigator described the patient review scale and explained using scale scores. The supervisors reviewed patient and student fascination sheets for any possible problem.

The relationship was scheduled with a brief review of the Wolcom and Harris studies to demonstrate the feasibility of sampling patient satisfaction with student care. Fluctuations in daily hospital census figures resulted in individual patient-receiving therapy from more than one student during the course of this eight-day study. When this occurred, the patient completed a separate patient rating scale on each student. No more than the students were allowed to treat the same patient during the study period. Each of the eight clinical supervisors involved in the study had three to five years of supervisory experience with students. Supervisors were responsible for no more than five consecutive therapy students. The nurse-investigator-student ratio was established by the Joint Review Committee for Respiratory Therapy Education as the number that can be adequately supervised in the clinical phase. Each student was rated by the supervisor on two separate evaluation instruments at the end of the eight-day data collection period. The first instrument was the

patient rating scale and the second was a checklist-style evaluation
of performance criteria. Trainers and supervisors were well acquainted
with each other through clinical practice of 27 weeks' duration prior
to the onset of the study.

Supervisory Checklist

The supervisor-administered checklist (Appendix F) for the
evaluation of clinical performance by a respiratory therapy student
was representative of similar devices used throughout respiratory
therapy education programs (Ruffhauser, 1980). Interactional Skills
Pretrust Breathing (IPTS) was the procedure evaluated in this study.
The IPTS was specifically chosen as the procedure for evaluation due
to the large amount of time spent with the patient while performing
this mode of therapy.

The checklist was designed with a column of 15 steps to be per-
formed in accord with the procedure sequence. Each step was evaluated
as "task in sequence," "task not in sequence," "task not done." When
a task was performed in sequence, one point was awarded. When a task
was not performed, most credit was awarded. For any task to be
credited, it must have been performed in a manner consistent with
the procedure manual. All points were tallied and calculated as a
raw sum of the total possible points.

All students were evaluated once during each two-day data
collection period by their immediate supervisor. This resulted in
a total of four evaluations during the brief eight-day data collec-
tion period for the study.

Controls

The responsibilities of the respiratory therapist are rarely fully understood by the patient, in part because the profession is relatively new. The investigator distained several controls to guard against any possible patient misinterpretation of the student's responsibilities.

First, patients were asked to evaluate only respiratory therapy students. This point was repeated during supervisor orientation of the study and in written directions to the patients.

Second, the students were distinguished uniforms to assure easy recognition by patients and to guard against possible confusion with staff technicians. The third precaution used in this study was for the student supervisors to introduce themselves to the patient and to make special efforts to have patients observe them in roles different from those of staff technicians.

Methodological Mechanisms

The Posmuse product concept was chosen because of its wide use and acceptance on a univariation intent. As a systematic technique of analysis, using semibaseous data to summarize the relationship between two continuous variables, the Posmuse coefficient of correlation is well suited for production. It was used to test the relationship between student Aintasia CFs and ratings by patients, clinical supervisors, and students. The Posmuse coefficient of correlation was also used to compare the ratings between patients, students, and clinical

supervisors as causes the relationship between these groups and a supervisor-completed check of skills.

The relationship between the patient variables of education level, patient age, and number of hospitalizations, and patient satisfaction with care, was examined using the $\underline{t}$ test. The small sample size dictated the use of the $\underline{t}$ test because it is a reliable index for accepting the significance of difference between the means of two independent samples.

A multiple regression procedure was implemented to partial out patient variables of age, education level, and previous hospitalizations thought to affect patient ratings of students. The resultant scores represented data that could be used to predict student clinical performance.

CHAPTER IV

RESULTS AND DISCUSSION

This chapter contains a statistical analysis and discussion of the results of the study on the relationship between respiratory therapy student dietetic grades and clinical skills rated by supervisors, patients, and students. It contains a discussion of tests of the Hypotheses and findings, and a correlation of findings in this study with those of Walent (1977) and Martin (1981).

The Patient Rating Scale provided the evaluator with a continuous for assessing satisfaction with patient care by students. Our restricted purpose the continuum ratings were converted to raw scores of from one to five. A rating of one was equivalent to a very high degree of dissatisfaction and a rating of five equated to a very low degree of satisfaction with care.

The Present Sample

Throughout the one-week more collection period, the 40 resource treated 163 patients. Rating scales were distributed to 162 patients who agreed to participate in the study. Our hundred twenty-two (122) patients completed the rating scale for a return rate of 85%. All scales returned were complete and therefore used in the study. Sixteen ones rated by a minimum of three patients, one student

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resulting from readings. Patients discharged prior to the end of ten days with a student were instructed to leave their mother sheets at the nursing desk. Those forms were not used and accounted for 13 of the 31 rating scales not completed by the patient sample.

Of the 131 patients who completed ratings, 44 were males and 33 were females. No investigation was conducted on the interactive effects of student sex on college provided by patients. This report of the study was not conducted by either Watson (1975) or Morris (1981) in their investigations.

The patient distributions were heavily skewed in the nine-to-ten group (104, 80%). Thirteen (13) or 12% of the patients were younger than 40. The majority (81%) of the patients were admitted with a primary diagnosis of chronic degenerative lung disease. This trend was also seen in the review of previous admission statistics that revealed 81 patients (14%) had been hospitalized three or more times. A characteristic of chronic obstructive lung disease is repeated hospitalizations. The second most frequent diagnostic group was for surgical procedures. Surgical procedures accounted for approximately 16% of the patient population, while 65 were diagnosed as orthopedic patients.

The educational preparation of the patient population was evenly distributed between 265 having a high school education or less and 365 with at least some college. Respiratory disorders make no distinctive in education level.

The Respiratory Therapy Student Sample

The sample of 48 students included 15 males and 33 females. The age range was 19 to 33, the median being 24. The majority of students (68%) were 20 to 29 years old. These students were 15 years old, nine were 30 to 39 years old, two were 44, and one was 19 years old. The mean diabetic respiratory therapy GPA was 3.04. Student grades in clinical courses were averaged between didactic components and clinical components.

Supervisor Sample

Eight clinical supervisors rated 48 students on each rating scale item. In addition to rating scale assessments, each returned and evaluated with a ventilatory checklist of criteria by the clinical supervisors. The checklist instrument was frequently used by the clinical supervisors and was familiar to the students.

Units of Hypotheses

Hypothesis 1. Ratings of respiratory therapy students by patients, clinical supervisors, and self form a positive correlate with respiratory therapy grade point average.

In this research periods, supervisors, and students were a common denominator digestible AA in evaluating student clinical performance. In statutes, clinical supervisors pass a traditional checklist Hypothesis 1) to evaluate each student. The intangible calculated a fourteen product common correlation so diabetic grade

point average and the rating scale scores for each group of evaluations (Table 1).

Table 1
Pearson Correlation Coefficient with Student Dietetic
Respiratory Therapy Graduation Average and
Clinical Evaluations

	Coefficient	Probability
Student Self-Assessment	.47	.01
Supervisor Assessment	-.11	NS
Patient Assessment	-.25	NS
Supervisory Checklist Assessment	-.30	NS

The analysis revealed a high positive correlation between student self-rating and grade point average. Supervisor and patient coefficients were both correlated with low and nonsignificant values when compared with student dietetic grade point average. As student grade point average increased, so did the self-rating of students; however, the correlation for supervisor and patient ratings with student GPA was negative, suggesting an inverse relationship. The hypothesis was not supported by the reported results.

Hypothesis 3. Ratings of respiratory therapy students by patients, supervisors, and self will have a positive correlation with each other.

All groups of raters assessed students "very high" on the patient rating scale (Table 2). A Pearson correlation (Table 3), however,

Table 3
Frequency—Very High Ratings (1.0)
All Genders by Rating Scale Item

Rating Scale Item	Prophets		Instructors		Priests	
	Number	Percentage	Number	Percentage	Number	Percentage
1	29	72.5	29	72.5	23	69.0
2	20	71.5	19	57.5	22	66.0
3	25	63.1	25	62.6	29	64.4
4	22	57.3	23	57.5	20	55.2
5	23	57.5	23	57.5	20	46.2
6	17	61.5	19	47.5	20	56.1
7	16	80.0	20	50.0	18	55.3
8	23	57.5	18	57.5	17	50.0
9	23	57.5	13	39.0	19	46.2
10	21	52.5	22	55.0	19	56.1
11	25	71.5	23	57.5	30	66.0
12	21	52.5	16	50.0	18	50.0
13	22	55.0	22	55.0	20	55.2
14	18	46.5	20	50.0	19	46.2
15	15	56.0	17	52.5	14	45.9
16	18	46.5	22	52.5	15	45.9
17	18	56.0	23	52.5	17	50.2
18	23	57.5	23	57.5	18	55.3
19	21	52.5	22	55.0	20	50.0
20	21	52.5	23	57.5	41	50.0
Mean		54.87		55.39		53.82

revealed low and nonsignificant correlations between students and instructors, students and problems, and supervisors and problems. The outcome of this analysis failed to support the hypothesis.

Table 3
Pearson Correlation Coefficients
Between Ratings of Contrasting Groups

	Coefficient	Probability
Student vs Supervisor	-.11	NS
Student vs Problem	-.23	NS
Supervisor vs Problem	+.19	NS

Hypothesis 3. Overall satisfaction with care given by respiratory therapy students will be assessed "very high" by patients, supervisors, and students.

Overall satisfaction with care given by respiratory therapy students was assessed by item 19 on the rating scale. Mean ratings of care 19 (Table 6) for the three groups of evaluators revealed satisfaction with care by respiratory therapy students as very high. Patients assessed students with the greatest degree of satisfaction, while supervisors were only marginally less satisfied as a group. Student self-ratings provided the smallest group of "very high" ratings suggesting that students may have been most critical of their overall performance of care. The hypothesis was supported by this analysis of satisfaction of care provided by respiratory therapy students.

Tabla 4
Mean Scores for Item 19

| | Percentage | | | |
	Very High (5.0)	High (4.0)	Neutral (3.0)	Mean
Student	34.07	13.45	2.9	1.23
Supervisor	23.19	23.11		1.33
Future	13.97	41.83	3.3	1.33
Overall	35.11	40.73	4.18	1.22

Hypothesis 4. Student grade point average will have a positive correlation with overall patient satisfaction.

A Pearson correlation for this relationship revealed essentially the same finding (Tabla 5) so that for hypothesis one. Supervisor and patient coefficients were both correlated with low and nonsignificant values when compared with student grade point averages. Student self-rating and grade point average yielded a high positive correlation with grade point average. As in the analysis for hypothesis one, as student grade point average increased, so did the self-rating of students. Hypothesis four was not supported in this analysis.

A Pearson correlation was computed to gather collaborative with respiratory therapy student care as measured by items 1 to 18 and satisfaction with care as measured by item 19, the overall satisfaction measurement. This analysis revealed a high level of agreement between the first 18 items of the rating scale and the final item designed to assess overall satisfaction with care by respiratory

cherapy students. This suggests that all groups of evaluators were consistent in their assessment of articulation with care and the overall evaluations given student performance its patient rating scale.

Hypothesis four was supported in this analysis.

Table 5

Pearson Correlation Coefficients
Overall Satisfaction with Care and
Grapmat Grade Point Average

	Coefficient	Probability
Student	.06	.61
Supervisor	-.11	.92
Patient	-.12	.60

Table 6

Pearson Correlation Coefficient Overall
Satisfaction with Care and Mean
Backage Air Count 1-14 of
Patient Rating Scale

	Coefficient	Probability
Student	.98	.00
Patient	.97	.00
Supervisor	.99	.01

Hypothesis 3. Patient ratings of student clinical performance from which characteristics of age, education, and previous admissions have been postulated will relate more strongly with student didactic grade point average than with non-specialist patient ratings of student clinical performance.

A t test was performed on all three patient variables of age, education, and previous hospitalizations. When these variables were measured against patient ratings of students (Table 7) no significant effect was observed for any of the patient variables and their respective ratings of students.

Table 7

t Tests of Significance, Patient Age, Educational
Level, and Number of Hospitalizations
With Total Rating Scale

Age	N	Mean	SD	SE	df	t	p
40 and below	15	1.46	.378	.053	119	.41	.683
Above 40	106	1.53	.561	.053			
Educational Level							
High school and below	66	1.50	.56	.068	119	.11	.883
College and higher	41	1.56	.57	.077			
Hospitalizations							
Two or fewer	53	1.43	.55	.030	119	1.78	.434
Three or more	80	1.23	.38	.037			

A regression procedure was implemented with patient characteristics of age, education, and previous hospitalizations all having been controlled out. The analysis yielded an F value of .72, which was not

significant. This result suggested patient characterization had no

correlational impact on the patient evaluation of students.

The lack of significant differences in the variables of age,

educational level, or number of hospitalizations with nursing scale

evaluations by patients could have been a result of the small sample

size or lack of variability in student assessment ratings. No addi-

tional comparisons were performed on this hypothesis since no rela-

tionship had been found. Hypothesis five was not supported by this

analysis.

Discussion of Results

Clinical educators have long believed that the better clinicians

student is also the better clinical performer, a belief not demon-

strated in this study. The highest correlation between GPA and the

rating scale was one from the supervisor had been the students. In

fact, the supervisor accepted the weakest correlation coefficient with

GPA. This finding is in disagreement with the research conducted on

the validity of student self-rating (Barbour, 1961; Heiner, 1970). The

paired coefficient indicated a moderate negative and non-significant

correlation with GPA and in this respect closely reflected earlier

studies on patient performance in evaluating health care delivery by

students. Supervisor-administered descriptions extracted a correlation

with student didactic GPA of -.20. The relationship was moderately

negative and non-significant, suggesting no relationship between this

traditionally implemented form of evaluation and didactic grade point

average.

Student dietetic grades in respiratory therapy coursework correlated .80 with the students' overall grade point average. This correlation suggested that the instruments used to evaluate student clerkship performance was highly related to the overall GPA in respiratory therapy coursework. Apparently educators are better prepared to evaluate dietetic performance than they are to evaluate clinical performance.

Data in Table 8 are a summary of the effectiveness of using one or more groups of evaluators in determining the strongest correlation with dietetic grades.

Table 8
Pearson Coefficients for Multiple
Raters vs Dietetic Grades

	Coefficient	Probability
Faculty Ratings	-.23	.05
Student Ratings	.47	.11
Supervisor Ratings	-.11	.03
Total Ratings All Three Groups	.27	.03
Total Ratings and Checklist Evaluation	.31	.01
Checklist Evaluation	-.30	.07

Students attained a significantly more positive correlation between self-assessments and their dietetic grade point average than

did either the patient or supervisor counties. These findings suggest that students have a clear perspective of their clinical performance when it is compared to their didactic grade point average.

One possible explanation for the highly positive correlation of student ratings and GPA is a requirement for all students to participate in twice monthly critiques of their clinical performance. These student-centered supervised clinical reviews or mini-series of instruction allow the student a variety of perspectives on their clinical performance and have firmed-hand knowledge of GPA, while clinical supervisors are not acquainted with the student's GPA. When all groups of evaluators correlated their combined ratings with didactic grades, a non-significant coefficient of .37 was produced. When the absolute evaluation made by the clinical supervisor was added to the combined rating made across and correlated with didactic grades a significant coefficient of .51 was produced.

The results of this analysis suggest that by combining input from a variety of participants a higher level of agreement with didactic performance can be achieved than that provided by patients or supervisors alone. Students' ratings produced a coefficient of .47 (p = .02), suggesting in this case that students agree or not in most accurate in producing clinical ratings in greatest agreement with didactic grades.

Hypothesis five stated patient ratings of student clinical performance free which characteristics of age, education, and previous admissions have been partialled will retain more strongly with student didactic grade point average than with uncorrectable patient ratings of student clinical performance.

Research conducted by both Watson (1978) and Martin (1981) suggested that patient characteristics of age, education, and previous admissions could have an impact on patient assessments of patient performance. Previous research has suggested that patients tend to have a show higher satisfaction with care than those less than 40. Education also exerted an influence on correlation with post-discharge educated patients prone to be more critical of care than those with high school education or less. Similarly, the number of previous hospital admissions was thought to affect patient assessment of care, with those patients having been hospitalized three or more times rating students higher than those with fewer than three admissions.

The analysis of patient variables has resulted in findings that conflicted with those of Watson (1978) and Martin (1981). Watson found that patients under 40 expressed more dissatisfaction with care than did older patients. Education level was also found to have a statistically significant effect on patient ratings, with better educated patients less concern with hospitalization. Finally, the number of previous hospitalizations was also found to have a statistically significant impact on ratings of students with those patients having three or more hospital stays more tolerant than those with fewer.

This investigation conducted a regression procedure with patient characteristics of age, education, and previous hospitalizations all having been correlated out. The resulting outcome was not significant. This result suggested patient characteristics had no statistical impact on the patient evaluations of students.

The lack of significant differences in the variables of age, educational level, or number of hospitalizations with rating scale

ambiguities by patients could have been a result of the small sample size or lack of variability in student assessment scores.

All student self-ratings were used when all responses comprised the 15-item rating scale. The responses by students were fairly equally distributed because very high (1.2) satisfaction with care (34.6%) and high (2.3) (43.6%). The case self-rating was 1.55 on a five-point scale.

Students in the third quarter of a four-quarter program are encouraged to have a realistic view of their capabilities. The results of this study suggest this view. However, students may remain in the respiratory therapy program only if they maintain a minimum GPA of 2.5.

An additional factor that may help resolve the consistently high self-rating is a program requirement that specifies that students must maintain a minimum grade of "C" in each professional respiratory therapy course in order to pass standing. This requirement also eliminated approximately one-half of the variance in student performance. An important aspect in the program of study for respiratory therapy students is the development of a professional's minimum toward serving the health care needs of the patient. A professional's attitude is critical if the student practitioner is to be successful in the rapidly changing environment of today's health care facility. The results of this study suggest that students receive their professional ideology of medicine in a positive manner, a view both supportive and patients shared (Table 4).

Eight clinical experiences raved the 60 students on each rating scale item. Average ratings of students by clinical supervisors were 58.941 very high (2.01 and 37.113 high (3.0) on the subject rating scale (Table 4). The mean score for this group of raters was 2.51 (Table 4) on a five-point scale. No supervisor rating was below neutral (3.0) which accounted for 3.5% of the total evaluation.

Supervisors rated students higher than any other group. A number of factors could explain the high marks given by the supervisors. First, as clinical educators, these individuals were responsible for the work performed by their students and consequently tend to favor their students as well as be alert to the quality of care. Older ier, instructors are aware while not only for their own address, but also for the welfare of their students.

Second, supervisors strive to upgrade the level of performance of students, always looking for methods of improving the quality of care provided by their charges. This is due to the accountability for student performance and because as a group, clinical educators generally strive to bring the quality of health care to the highest attainable magnitude. As a result of providing students with an appropriate role model the clinical supervisor anticipates an improvement in the standard of care provided by students. Students will frequently improve their performance as a role model contributing to favorable evaluations by their supervisors. Finally, supervisors may take a paternal view of students and less time higher than students rate themselves. Additionally, supervisors may give students the benefit of the doubt in their ratings, resulting in assessments that

saw more positive than otherwise normal. High ratings of students
by the supervisors demonstrated their general satisfaction with
performance of these clinical skills.

Ratings of laboratory therapy students by patients were once
again consistently high; very high ratings accounted for 53.97% while
high ratings yielded 41.63% of the total evaluation (Table A). The
mean ratings for this group was 1.55 on a five-point scale.

Several factors may contribute to the positive evaluation in
addition to the quality of patient care. Each student provided therapy
to no more than six patients but was assigned to two patients on a
permanent basis with the remaining four patients treated on a rotating
schedule. This allowed each student to provide comprehensive care to
assigned patients and consequently patients came to know their thera-
pists better. Another reason for higher student ratings from patients
is the conversional taxonomy of patients to develop a personal rapport
toward students, a factor that may contribute to positive ratings.
As evaluators of care, patients found themselves in relatively un-
familiar surroundings possibly resulting in a tendency to overrate
student practitioners because of being uncomfortable with the respon-
sibility for rating students or from fear of abuse. A final explana-
tion for high ratings by patients was that students may have learned
therir their best behavior knowing that patients were evaluating them.

Comparison of Findings with Those of Moines and Martin

This study has been partially based on the earlier research
conducted by Moines (1970) and Martin (1961) in comparing patient

satisfaction with nursing care. Both Watson and Martin noted that patients rated students higher than either instructors or students did themselves. Findings of this study of complicity (Dunkley students are similar although not by as wide margins.

The studies conducted by Watson (1975) and Martin (1981) correlated their rating scale results with GPA only as a point of reference. This study has included several measures of GPA, didactic grades, experience, patient, and student ratings, and supervisor evaluations through a checklist. The previous studies contained no comparable data, therefore, no comparison has been conducted.

The major purpose of this study was to test the relationship
between student didactic grades and ratings of the clinical per-
formance as reported by multiple evaluators with a common instrument.

In preparing to test the hypotheses the researcher used a rating
scale of patient satisfaction with nursing care to evaluate student
performance in the clinical setting. Although the rating scale was
originally intended for use with nursing students, it was easily
adapted for use with respiratory therapy students. The changes in the
rating scale were studied along with the proposed procedures in a pilot
test conducted ninety days prior to the primary study. The pilot test
was conducted at another school with an identical respiratory therapy
program.

The patient rating scale and a clinical supervisor administered
checklist of criteria were both used to evaluate student clinical
performance as it related to student didactic grade point average.
Several groups were involved in the collection of data for a period
of eight days. The groups involved in the study included patients,
students, and clinical supervisors. Each of the three groups evaluated
the patient rating scale. Clinical supervisors also evaluated student
performance with a checklist of criteria style instrument.

The sample included patients, students, and clinical supervisors. Ratings were obtained from 131 patients, 9 supervisors, and 40 students. The number of patient ratings per student varied from three to four, with the majority being evaluated by three raters. Each student was evaluated by a clinical supervisor and completed a self-assessment as well.

All rating scales returned by the patients were usable with no one reporting difficulty with the rating scale. Each student was also rated by a clinical supervisor on the checklist style Conference, Patient, student, and supervisor evaluators saw highly positive. Administrative support from both the primary clinical Affiliates and Brunswick Junior College was strong.

Hypothesis 1. Ratings of respiratory therapy students by patients, clinical supervisors, and self will have a positive correlation with respiratory therapy grade point average.

The investigator calculated a Pearson product moment correlation on didactic grade point average and the rating scale scores for each group of evaluators (Table 1). The analysis revealed a high positive correlation between student self-rating and grade point average. Supervisor and patient evaluators were both correlated with low and non-significant values when compared with student didactic grade point average. **The hypothesis was not supported by the reported results.**

Hypothesis 2. Ratings of respiratory therapy students by patients, supervisors, and self will have a positive correlation with each other.

All groups of raters assessed students "very high" on the printed rating scale (Table 2). A Pearson correlation (Table 2), however,

revealed low and nonsignificant correlations between students and instructors, students and patients, and supervisors and patients. The essence of this analysis failed to support the hypothesis.

Hypothesis 3. Overall satisfaction with care given by respiratory therapy students will be assessed "very high" by patients, supervisors, and students.

Overall satisfaction with care by respiratory therapy students was assessed by item 19 on the rating scale. Mean ratings of item 19 (Table 6) for all three groups of evaluators revealed satisfaction with care by respiratory therapy students as very high. The hypothesis was supported by this analysis if satisfaction of care provided by respiratory therapy students.

Hypothesis 4. Students with proper goals will have a positive correlation with overall patient satisfaction.

A Pearson correlation for this relationship revealed essentially the same finding (Table 5) as for that of hypothesis one. Superficial and patient coefficients were both correlated with low and nonsignificant values when compared with student group point average. Student self-rating and grade point average yielded a high positive correlation with grade point average. Hypothesis four was not supported in this analysis.

Hypothesis 5. Patient ratings of students clinical performance from which characteristics of age, education, and previous admissions have been particularized will retain more strongly with student clinical grade point average than with noncorrelated patient ratings of student clinical performance.

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A j test was performed on all three patient variables of age,
education, and previous hospitalizations. When these variables were
measured against patient ratings of students (Table 1) no significant
effect was observed for any of the patient variables and their respec-
tive ratings of students.

A regression procedure was implemented with patient characteristics
of age, education, and previous hospitalization all having been ser-
ialized red. The analysis yielded an F value of .77, which was not
significant. This result suggested patient characteristics had no
statistical impact on the patient evaluation of students. Hypothesis
five was not supported by this analysis.

The major finding of the study was the positive statement by
patients, students, and supervisors of student clinical performance.
Not only did all three groups evaluate students in a similar manner,
but their assessments were remarkably alike in one another. The
relationship between student self-assessment and clinical GPA was
although positive, while patient and supervisor assessments were re-
lated to distaste GPA only by weak negative coefficients. When the
assessments of all evaluators were compared with a supervisor required
checklist style instrument, the resulting correlation with distaste
grades was .21. This establishes compared quite favorably when the
checklist style evaluation instrument was correlated with distaste
grades by itself, -.30.

These results demonstrated that clinical assessment by students
themselves yielded the highest correlations with distaste grades.
Clinical supervisors and patients provided students with clinical

ratings that were generally weakly correlated with student clinical
grade point average suggesting that these individuals may lose accurate
evaluators of student clinical performance when that performance is
correlated with didactic performance. A possible explanation that may
help describe these results is students may rate themselves on the
basis of their knowledge of grade point average, while clinical faculty
and preceptors rate on clinical performance. When the evaluations of all
three groups were combined with a supervisor administered checklist of
criteria a moderately positive correlation was produced, .11. This
result suggested that when patients, students, and supervisors are
involved in the assessment of clinical performance by nonprimary
therapy students a stronger agreement with clinical performance is
likely to be achieved than that produced by supervisors alone with a
traditional checklist of criteria.

CHAPTER VI

IMPLICATIONS, CONCLUSIONS, AND RECOMMENDATIONS

This chapter reveals the implications of findings from the study for use of a primary rating scale as an adjunct technique for student assessment in the health care environment. It also contains suggestions for further research as well as a discussion of the limitations of the study.

Implications of Findings for Use of the Scale

A primary rating scale of satisfaction with health care was used to provide data on the opinions of students, patients, and supervisors in assessing student clinical performance. Feedback from the rating scale was provided to both students and instructors on the quality of care delivered by respiratory therapy students. Increasing student awareness of how they are perceived by others should ultimately result in improved clinical performance.

Patient satisfaction with health care is vital to all health related programs. The rating scale is a measure of patient satisfaction with care provided by respiratory technician students. Since the rating scale is a useful tool for the evaluation of patient satisfaction with health care, it may serve as even more important role as a tool for assessing satisfaction with health care delivered by all health related practitioners.

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When this scale was used as a tool in a compensation, multiple rater assessment plan, significant correlations with didactic performances were realized. Those findings offer the dominated an opportunity to evaluate the performance of students in the health care facility with a general level of agreement with didactic performances that that achieved by more traditional methods. An additional feature of this scale is that it will allow health care facilities to continually improve the curriculum. Those areas of improvement can be discovered by reviewing the pertinent assessments of students. When areas of deficiency are discovered individual modifications can be implemented resulting in improved health care programs.

The next significant use of this rating scale may not be in assessing programs or individuals, but rather it will serve as a continuing reminder to the respiratory therapy student of their role in the health care area, specifically the practice of quality patient care.

Consumer protection is still another area for potential use of this rating scale. The patient rating scale may be used to help educate patients in some of the expected behaviors of health care providers, possibly enabling them to increase their ability to evaluate levels of professional competence. An equally important use for this scale is in assisting patients as health care consumers to voice their opinions of health care delivery through the issues of the rating scale.

Scale 1(B&I) scaled the manner of time needed for the collection of rating scale data was excessive for use as an evaluation instrument.

This researcher found that when an instrument was administered routinely, preincubnively to a patient sample with multiple admissions, the item required to administer the testing scale are similar to that required in completing an intervention checklist. Variance seem generally equal to participants in this study. Presently offering suggestions for program or hospital improvement. The hospital and college administrations were best eager for results of patient satisfaction with student practitioners. The rating scale would seem to offer an opportunity for these vested groups to improve their communications.

Conclusion

Several limitations were identified in this study. Only students in the third of four clinical courses participated in this study. This feature resulted in a limitation of the sample size. Two periods to be generalizable to all respiratory therapy practitioners a larger sample size will be needed. In addition in the sample size, different levels of training will be required to assess student performance throughout their training period. If the rating scale is to be used as a part of clinical evaluation, this question will have to be studied in greater detail, particularly for the evaluation of beginning students. This was the first attempt at using a satisfaction based rating scale for nurses in the assessment of respiratory therapy practitioners. For the results of this study to be generalized to other health professions additional study should be conducted. Marsha's study limited the patient population to whites in medical-surgical patient care units. This study included selected intensive care patients with no

significant change in patient response. Future studies should attempt to include other groups of patients in the rating scale to assess their effect on student ratings.

Martin reported that 34% of the patient sample failed to return rating scales. This loss of data resulted in a degree of concern for the effect on the rating scale results. This study experienced no 95% return rate. A major factor in the high rate of return was the relationship which the clinical supervisors as well as extramural visits to "remind" patients when the data were due for collection. This close cooperation between patients and supervisors encouraged patients to feel were a part of the study.

Only four patients failed to return their rating scales without reason. The remainder of returned rating scales were collected by supervisors because of a patient's overwhelming medical condition or due to unexpected discharges.

The distribution of previous admissions and patient age was changed toward the upper end of their respective scales. Eighty-nine per cent of the patient sample was older than 40 while 86% of the sample had been hospitalized three or more times. These characteristics of the elderly patient population of this population hospitals. Morgan (1974) reported that patients who had more than two previous hospitalizations were more satisfied with care received than those rated a small number of times. It is unknown whether the more dependent older patient is more satisfied with the care they receive. It should be noted, however, that the patient sample used in this study is representative

of the specific population associated with chronic obstructive
lung disease.

Recommendations for Additional Research

The major recommendation from this investigation is for radioactive studies to provide for measurement of the validity and reliability of the patient rating scale as an assessment device. The original rating scale developed by Nelson is now tacitly unreliable and lends itself to modification of the language to most specific program requirements. Comparison studies are needed between health profilelate to make wider use of the evaluative developments produced with ever growing frequency.

An area of concern discovered in this study was that performed by students as being weak in the knowledge required for home health services in patients. In didactic assessments of this area students scored as a group well above average. The coding scale, however, portrayed several ratings in the neutral zone for this subject area, leading the researcher to question whether the students really were properly prepared in this area of the curriculum.

Martin's study found that only the patient characteristics of previous hospitalizations was significantly related with patient ratings of students. Nelson, however, reported that all three patient characteristics of age, education, and previous admissions were significantly related with select assessments of students. This study found no relation between patient characteristics and their ratings of students.

The variability of results on this question suggests that additional research should be conducted.

A larger patient population should be used to assess the effect of patient characteristics on ratings of evaluations.

Future studies will gain a wider sample of patients if other data collection procedures are performed to addition to the paper and pencil format. A paper and pencil format for data collection tends to exclude mobility impaired patients, an impatient segment in any health care setting. Future studies should also conduct further assessment of the impact of patient characteristics on the rating scale evaluation even though there was no significance effect found in this study. Another area for future study is the reliability of this patient rating scale with other allied health professions. Additional research is required on the adaptability of clinical evaluation instruments from one allied health profession to another. Many evaluation instruments are currently being used to assess the clinical abilities of students and health field. The results of this study would suggest that those in some agreement between ratings for nursing students and ratings for continuity therapy students when rated on the same general core criteria.

Morris urged that further correlations between GPA and student clinical performance be done to increase the research on this phase of health related education. This correlation was a major goal of the present study and produced significant correlation coefficients. The results were significant, particularly when the rating scale values for students' self-evaluations were correlated with didactic grades.

The implication is for program faculties to give thought to using other groups of evaluators, particularly students, in the assessment of student performance in the clinical setting. This is particularly important when viewed from the impact these evaluations have in shaping student allied health practitioners into the professionals of tomorrow.

1.	Seldom acknowledges me; fails to recognize when I need attention. [ ]	Usually ignores me when I need help; seems to avoid interacting with me. [ ]	In a crisis only seems to notice me. [ ]	Is always aware of my needs and responds to them. [ ]	Usually understands how I feel and is ready to help me. [ ]
2.	Maintains a cold, distant manner; acts as if I am a number. [ ]	Is polite but never seems to take time with me. [ ]	Acknowledges my presence but is mostly businesslike. [ ]	Is always warm and friendly when around me. [ ]	Is genuinely concerned about me and shows it. [ ]
3.	Gives no recognition to my feelings or problems; is not interested in me. [ ]	Minimizes my problems; acts as if I am imagining things. [ ]	Listens but does not act on what I say. [ ]	Is aware of my feelings and tries to help me. [ ]	Always shows concern and sensitivity to my needs and wishes. [ ]
4.	In general seems careless; makes mistakes often. [ ]	Is sometimes careless; I often have to remind. [ ]	Does a routine job but no more than that. [ ]	Is usually careful and thorough in what he/she does. [ ]	Is always careful and precise; I have complete confidence. [ ]
5.	Explains nothing; leaves me wondering what is happening. [ ]	Explains little unless I ask. [ ]	Explains things when I ask but not before. [ ]	Usually explains what will happen and why. [ ]	Always explains fully and makes sure I understand; puts me at ease. [ ]

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15.
Exactly as reported on the list, I would order the complete list of procedures to be performed on the patient as checked on his card.

[ ]

16.
It self-evident that the procedures to begin with those pictured in his card.

[ ]

17.
Another procedure I would order on the list would be those that come next and such.

[ ]

18.
Possibly I would then begin interviewing the patient before I ordered the procedures and such.

[ ]

19.
Standard hospital that would allow me to know what to order first and such.

[ ]

20.
I would order as a procedure and order as the next one, and such.

[ ]

21.
It really is important that I know where the procedures on before going with them and such.

[ ]

22.
It really is clear to me that the order in which I do the procedures makes no difference and such.

[ ]

23.
Presently I would begin with the procedure the patient already knows and such.

[ ]

24.
Presently I would make the most of the procedures that I begin with and such.

[ ]

25.
Right now as I stand with the procedures, I really don't know which one to begin with and such.

[ ]

26.
Right now I am still stumped as to which procedure I begin and such.

[ ]

INSTRUCTIONS TO PATIENT

General Information

Thank you for agreeing to participate in this study. In the next ten days, a completely instructed student from Brunswick Junior College will provide you with the respiratory therapy ordered by your physician. All respiratory therapy students taking part in this study are advanced students working under the direct supervision of experienced clinical supervisors. The reason for conducting this study is to better allow our teaching faculty an opportunity to study how you, the patient, view care provided by our students. The results of this study will allow us an opportunity to evaluate the program and make changes in the curriculum as indicated by your response. After your student has completed your therapy for the last time on the second day, you are requested to complete the attached rating scale and return it in the student's attached supervisors whom they make rounds later in the day. The student will not observe your responses, and all responses will remain absolutely confidential. Your assistance with this study will have no effect on the care you receive now still in effect student program. If you are discharged before the end of your second day of therapy, please return the rating scale to the nursing desk.

Your assistance in helping us complete this study will allow the allied health faculty at Brunswick Junior College to better understand

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has patients feel about the care provided by their systems. If you
have any questions concerning this study, please feel free to ask one
of the respiratory therapy clinical supervisors. Then you once again
for your assistance.

INSTRUCTIONS FOR THE RATING SCALE

This form was developed to better help you inform the clinical
supervisor about the care you have been receiving from the advanced
respiratory therapy students at Brunswick Junior College. Each of
the 15 lines on the rating scale contains three general statements
that may describe your opinion of the care provided by the respiratory
therapy student. Place an (x) in the box on each line that most
clearly describes how you felt about the student who has been treat-
ing you. Please make a response to all 15 lines. An incomplete
rating scale will make interpretation of your results more difficult.

All responses will be kept in the strictest confidence. Your
evaluation will not be shown directly to your student nor will your
responses affect the student's grade. Your assistance will help us
to improve the care that our students provide to patients. Thank you
for your assistance in this study.

APPENDIX C
PATIENT DEMOGRAPHIC INFORMATION FORM

PATIENT DEMOGRAPHIC INFORMATION

1. Sex _____   Male _____   Female _____

2. Age _____

3. Occupation (If retired or disabled, please indicate your most recent occupation.)

   _____

4. Education

   Grade . . . . _____
   Some high school . . . . _____
   High school diploma or GED . . . _____
   Some college . . . . _____
   Four-year college degree . . . . _____
   Some graduate work . . . . _____
   Graduate degree . . . . _____

5. Number of previous hospital stays _____

6. Diagnosis(es) _____

   _____

   _____

7. Student Number _____

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This is a study to determine the validity of patient input to
providing a portion of the data used to evaluate your clinical
performance. Historically, clinical instructors have been largely
responsible in determining a student's grade for clinical work
experience. This investigation is interested in assessing patient
perceptions of student clinical performance. There have been very
few systematic attempts to judge the validity of involving patients
in evaluation of the health care profession. With your assistance,
you will be among a small group of health care students that have
attempted to break through the traditional boundaries of evaluation.

Patient evaluations will not have a bearing on your grade in this
course. The unit will be shared with clinical supervisors to initiate
generalizing concerning patient assessment of care. Patient data will,
in turn, be shared with individual students in better allow them an
opportunity to assess how they are perceived by patients. In addition
to patient assessments, clinical supervisors will evaluate each of you
at the end of an eight-day rotation cycle. Finally, at the same time
that you are evaluated by your supervisor, you will each have an
opportunity to evaluate yourselves from the viewpoint of your patients.
All evaluations will be conducted using the patient rating scale
developed for completing clinical students. Patient data items and
rating scales will be picked up on every second day of clinical,

for a total of four collections. All patients will remain anonymous as will you, the student. Patient participation is voluntary. Both the college and hospital administrators have granted permission for this study. If you have any questions concerning this study, please ask either your clinical supervisor or myself.

Thank you for your assistance with this study.

APPENDIX E
STUDENT DEMOGRAPHIC INFORMATION FORM

STUDENT DEMOGRAPHIC INFORMATION

Student Number: _____

Age: _____

Number of college credits earned: _____

Theory grade in current Respiratory Therapy courses: _____

_____

_____

Respiratory Therapy Course Course:

_____ RES 101 Introduction to Respiratory Therapy I

_____ RES 102 Basic Sciences

_____ RES 103 Microbiology & Pharmacology

_____ RES 111 Introduction to Respiratory Therapy II

_____ RES 104 Anatomy & Physiology

_____ RES 105 Cardiovascular Anatomy & Physiology

CHECKLIST FOR CPRB

Learning Activity 7.5

	TASK IN SEQUENCE	TASK NOT IN SEQUENCE	TASK NOT DONE
Checklist for assessment of CPPB Skills			
1. Check project team for:			
a. Diagnosis			
b. Procedure Error			
c. Prevention Lab Experts			
2. Assemble equipment (CPR, RESCY, Mechanical).			
3. Bring equipment including ventilators to room.			
4. Dress patient and introduce yourself.			
5. Confirm patient identity with relatives.			
6. Measure radial pulse and compare with chart.			
7. Explain purpose of procedure and physician's room.			
8. Bring equipment to bedside.			
9. Position patient in Trendel's position when possible.			
10. Connect to monitor:			
a. If remote headsleffet is plugged in to connect Em.			
b. Practice treatment several times.			
11. Add medication to catheter.			
12. Begin correctness.			
13. Adjust ventilator to patient.			
14. Observe patient for possible medication side-effects.			

	TASK IS SEQUENCE	TASK IS NOT SEQUENCE	TASK NOT DONE
15. Perform chest coordination for assessment of personal effectiveness.			
16. Upon completion of treatment notify patient:			
a. when to expect next treatment;			
b. to report to have a productive cough.			
17. Reassemble, clean, and dry equipment. Reassemble and store in antistatic case.			
18. Chart appropriate including all points listed in previous manual:			
a. treatment name and duration,			
b. dosage of medication used,			
c. pulse before, during and after treatment,			
d. patient positioning and stabilization,			
e. manipulation report,			
f. description of mucous production,			
g. unusual observations,			
h. or patient comments,			
i. signature and MTS.			
TOTAL			
POSSIBLE			

MASTER LEVEL

____ Excellent: AUXO task is sequence.

____ Good: At least ALL task is sequence.

____ Bridge: At least NOT task is sequence.

____ Poor: A minimum of NOT task is sequence.

____ Fallout: Less than NOT task is sequence.

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BIOGRAPHICAL NOTICE

Mr. Lloyd Watson was born August 3, 1951, in Boston, Massachusetts. Throughout his childhood he involved extensively with his family until graduated from Milford High School, Milford, Connecticut. At this point his family settled in Vermont where Mr. Watson entered Lyndon State College. In 1974 he married Ann Elis Church and transferred to the University of Maine at Portland-Gorham where he later earned the Bachelor of Science degree, Summa Cum Laude, in 1975.

Thanksgiving, 1974, marked the birth of his first child, Sarah Beth, an event that was followed six weeks later by a move to Brunswick, Georgia. In Georgia Mr. Watson joined the faculty of Brunswick Junior College as Instructor of Respiratory Therapy. Eighteen months later he was awarded the Master of Education degree by Georgia Southern College, Statesboro, Georgia.

Throughout the next 26 months Mr. Watson involved himself with the development of the respiratory therapy curriculum. The birth of his second child, Ryan Edward, in July, 1980, also initiated his application to the University of Florida for advanced graduate work. This study has been pursued uninterrupted except for the arrival of a third child, Lloyd David, in March, 1982.

Mr. Watson has recently accepted an appointment to serve as academic advisor for instruction at Swainsboro Area Technical School, Swainsboro, Georgia.

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I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.

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Janet M. Morril, Chairman
Professor of International Leadership
and Support

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.

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Margaret R. Morgan
Professor of International Leadership
and Support

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.

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Robert A. Roe
Professor of Foundations of
Education

This dissertation was submitted to the Graduate Faculty of the Division of Curriculum and Instruction in the College of Education and to the Graduate Council, and was accepted in partial fulfillment of the requirements for the degree of Doctor of Education.

April, 1986

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Research